WHAT IS CLAIMED IS:

1 1. A method, comprising:

2   detecting a write command to a frame buffer;

3   determining a region in the frame buffer associated with a frame buffer address in

4 the write command; and

5   determining whether the region is the same as a last-modified region.

1 2. The method of claim 1, further comprising:

2   when the region is not the same as the last-modified region,

3   sending the region to a display device associated with the frame buffer, and

4   setting the last-modified region to be the region.

1 3. The method of claim 1, further comprising:

2   when the region is the same as the last-modified region, refraining from sending

3 the region to the display device until a different region is detected.

1 4. The method of claim 1, wherein the write command is issued by a graphics engine to

2 the frame buffer.

1 5. The method of claim 1, wherein the frame buffer comprises a plurality of regions each

2 representing a plurality of pixels on a display device, and wherein the region is one of the

3 plurality of regions.

1 6. The method of claim 5, wherein the plurality of regions represent the plurality of pixels

2 in a rectangular shape on the display device.

1 7. The method of claim 6, wherein each of the plurality of regions represents a same

2 number of pixels.

1   8. The method of claim 4, wherein the detecting is carried out by logic connected to the
2   frame buffer and the graphics engine.

1   9. An apparatus, comprising:
2   a graphics engine to:
3   generate a write command having an associated region in a frame buffer,
4   determine whether scan-out logic is accessing the associated region in the
5   frame buffer, and
6   store the write command in memory associated with the graphics engine
7   when the scan-out logic accesses the associated region in the frame buffer.

1   10. The apparatus of claim 9, wherein the graphics engine is further to:
2   send the write command to the frame buffer when the scan-out logic is not
3   accessing the associated region in the frame buffer.

1   11. The apparatus of claim 9, wherein the frame buffer comprises a plurality of regions
2   each representing a plurality of pixels on a display device, and wherein the associated
3   region is one of the plurality of regions.

1   12. An apparatus for writing to a display device, comprising:
2   a frame buffer comprising a plurality of regions, wherein each region represents a
3   respective plurality of pixels on the display device; and
4   logic to accumulate writes by a graphics engine to one of the plurality of regions
5   in the frame buffer until the graphics engine writes to another region of the plurality of
6   regions in the frame buffer, wherein when the graphics engine writes to the another
7   region, the logic is to cause the one region to be written to the display device.

1   13. The apparatus of claim 12, wherein the logic comprises a plurality of D-type flip-
2   flops.

1   14. The apparatus of claim 13, wherein one of the plurality of D-type flip-flops is to

2   receive input of a region number of the one region and a clock input to be active when

3   each of the respective writes occurs.

1   15. A signal-bearing medium comprising instructions, which when read and executed by a

2   processor comprise:

3   accumulating writes by a graphics engine to one of a plurality of regions in a

4   frame buffer, wherein the plurality of regions represent respective pixels on a display

5   device;

6   detecting that the graphics engine has written to another region of the plurality of

7   regions in the frame buffer; and

8   in response to the detecting, causing the one region to be written to the display

9   device.

1   16. The signal-bearing medium of claim 15, wherein the detecting further comprises

2   converting frame buffer addresses in the writes to region numbers.

1   17. The signal-bearing medium of claim 15, wherein the causing further comprises:

2   instructing scan-out logic to copy the one region from the frame buffer to the

3   display device asynchronously from the writes to the frame buffer.

1   18. An apparatus, comprising:

2   a first D-type flip-flop including

3   a first data input to indicate a region number of a region currently being

4   written to a frame buffer, and

5   a first clock input to be active when a write to the frame buffer has

6   occurred.

1   19. The apparatus of claim 18, further comprising:

2   a second D-type flip-flop, including

3   a second data input coupled to a first output of the first D-type flip-flop,

4   and

5   a second clock input coupled to a compare logic output.

1   20. The apparatus of claim 19, further comprising:

2   a third D-type flip-flop, comprising:

3   a third data input coupled to a second output of the second D-type flip-flop,

4   and

5   a third clock input to be active when the write to the frame buffer has

6   occurred.

1   21. The apparatus of claim 20, further comprising:

2   compare logic, comprising:

3   a first compare data input coupled to the second output of the second D-

4   type flip-flop, and

5   a second compare data input coupled to the first output of the first D-type

6   flip-flop.

1   22. The apparatus of claim 20, where the third D-type flip-flop further comprises:

2   a third output to indicate a region number of a region to be sent to a display

3   device, wherein the third output is connected to a scan-out logic, wherein the scan-out

4   logic is connected to a display device..

1   23. A electronic device comprising:

2   a frame buffer comprising a plurality of regions each representing a respective

3   plurality of pixels on a display device;

4   a graphics engine to initiate writes to one of the plurality of regions in the frame

5   buffer;

6   snoop logic to cause the frame buffer to accumulate the writes; and

7   scan-out logic to write the one of the plurality of regions from the frame buffer to

8   the display device when instructed by the snoop logic.

1   24. The electronic device of claim 23, wherein the snoop logic comprises a plurality of D-

2   type flip-flops.

1   25. The electronic device of claim 24, wherein the D-type flip-flop further comprises an

2   exclusive-or gate.

1   26. An electronic device, comprising:

2   a graphics engine to, for every respective modified region in a set of candidate

3   regions,

4   copy the respective modified region from a frame buffer to a display,

5   when the respective modified region was written to during the copy, mark

6   the respective modified region as modified, and

7   when the respective modified region was not written to during the copy,

8   mark the respective modified region as not modified.

1   27. The electronic device of claim 26, wherein the set of candidates comprises all regions

2   that have not been written to during a most recent period of time.

1   28. The electronic device of claim 26, wherein the set of candidates comprises all regions

2   except a number of most-recently written to regions.

1   29. The electronic device of claim 26, wherein the set of candidates comprises a number

2   of least-recently written to regions.

1   30. The electronic device of claim 26, wherein the set of candidates comprises all regions

2   being displaced from the frame buffer.